

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION

DR-490

Effective August 1, 2011

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **July 2015**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Model 707 Commercial Steel Outswing Flush Doors, Impact Resistant, manufactured by:

Ceco Door, Division of ASSA ABLOY Door Group, LLC
9159 Telecom Drive
Milan, TN 38358
(731) 686-8345

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The Commercial 16 gauge Steel Doors manufactured by Ceco Door specified in this report are impact resistant, and consist of flush doors and frames. This report includes doors based on the following tested configurations:

Outswing Single Doors (±80 psf)

Configuration: X

Overall Size: 40" x 88" X 5 $\frac{3}{4}$ "

Panel Size: 35 $\frac{15}{16}$ " x 83 $\frac{1}{2}$ " x 1 $\frac{3}{4}$ "

Threshold: Pemko Aluminum ADA low profile Model 2005

The following applies to all doors:

Frame Construction: The head and jambs are one-piece 16-gauge steel with 2" face jambs, 2" to 4" face head, and a 5/8" stop height. The corners at the head and side jambs are mitered and of knockdown construction. Each corner is fastened with one metal tab and two #6 sheet metal screws or welded.

Panel Construction: The door panels are constructed from 16 gauge steel face sheets. The cores are expanded polystyrene bonded to the face sheets with adhesive. The lock edge is reinforced the full height of the door with 14 gauge steel channels welded to the skins 6 inches on center. The hinge edge is reinforced the full height of the door with 14 gauge steel channels welded to the skins 6 inches on center. The top and bottom of the door are closed with 16 gauge steel channels that are spot-welded to each face sheet 6 inches on center.

Reinforcement:

- Moritse Lock: 16 gauge steel
- Exit Device: 14 gauge steel
- Door Hinge: Hinge preparations are integral in the 14-gauge channel welded to the hinge edge of the door.
- Frame Head: None
- Frame Strike Mortise Lock: 7 gauge
- Frame Strike Exit Device: 12 gauge
- Frame Hinge: 7 gauge steel

Weather Stripping:

- Head and jams: Jamb: Pemko S88
- Threshold: Pemko 2005

Hardware:

- McKinney TA 2714 Hinges: 4 ½" x 4 ½" x 0.134 steel butt hinges

Lock Options: May use one of the following:

- Corbin Russwin ML2000 Series Mortise lock with latch bolt and dead bolt;
- Sargent 8200 Series Mortise lock with latch bolt and dead bolt;
- Yale 8800 Series Mortise lock with latch bolt and dead bolt; or
- Yale 7150(F) WS Rim Exit Device.

Product Identification: A manufacturer's identification label will be affixed to the door assembly. The label includes the manufacturer's name, "Ceco Door"; Intertek Testing Services or Underwriters Laboratories, as a third party certifier; the design pressure rating (± 80 psf); and compliance with ASTM E330, ASTM E 1886 and ASTM E1996.

LIMITATIONS

Impact Resistant Doors

Design pressures:

	Maximum Width (in.)	Maximum Height (in.)	Design Pressures (psf)
Single Outswing	36	84	± 80

Impact Resistance: These assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the Inland I zone and the Seaward zone. The assemblies passed an impact standard equivalent to Missile Level D specified in ASTM E 1996-04. The assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These assemblies will not need to be protected with an impact protective system when installed in areas where windborne debris protection is required.

Acceptance of Smaller Assemblies: Assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

INSTALLATION INSTRUCTIONS

General: The door assemblies shall be installed in accordance with Ceco Door installation instructions and this product evaluation report. The door frame assemblies may be installed and anchored to concrete, masonry, steel or wood framing as specified below.

- **Frame Anchored with Masonry Tee Anchors (16 gauge):** The frame shall be attached using a minimum of (4) four anchors per jamb. The anchors shall be located a maximum of 12 inches from the sill and spaced a maximum of 24 inches on center. along the jamb.
- **Welded Pipe Spacer (masonry or concrete):** The frame shall be attached using a minimum of (4) four anchors in each jamb. The fasteners shall be located a maximum of 12 inches from the head and 6 inches from the sill and spaced a maximum of 24 inches on center along the jamb. For attachment to concrete or masonry, the anchors shall be $\frac{3}{8}$ " diameter Powers Power-Bolt or $\frac{3}{8}$ " diameter Hilti Kwik-Bolt III with a minimum embedment depth of $2\frac{1}{2}$ inches into the masonry or concrete.
- **Welded Pipe Spacer (wood stud):** The frame shall be attached using a minimum of five (5) anchors in each jamb. The fasteners shall be located a maximum of 6 inches from the head and sill and spaced a maximum of 21 inches on center along the jamb. For attachment to wood framing, the anchors shall be $\frac{3}{8}$ " diameter x 5" long lag screws with a minimum embedment of 3 inches into Southern Yellow Pine (G \geq 0.55) wood framing.
- **Wood or steel stud slip-in anchors:** The frame shall be attached using a minimum of five (5) anchors in each jamb. The fasteners shall be located a maximum of 6 inches from the head and sill and spaced a maximum of 21 inches on center along the jamb. Each anchor will have a minimum of four (4) fasteners. For attachment to wood or steel stud framing, the fasteners shall be a minimum of No. 8 x 1" long drywall screws. The screws shall have a minimum embedment depth of 1 inch into Southern Pine (G \geq 0.55) wood framing or shall be affixed to 18 gauge steel studs.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.